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REVIEW OF DARBY'S UNITED STATES IN THE AMERICAN QUARTERLY.

> And shall we own such judgment? no—as soon
> Seek roses in December—ice in June:
> LORD BYRON'S *English Bards and Scotch Reviewers.*

In this age of authorship, men write, not what they are acquainted with, but what they think will sell; and whilst they employ materials that are common to all, whilst they invade no man's manor, and do not encroach on the public property, the transaction is a mere mercantile speculation, and requires from the author, just as much consideration as he estimates his own fame and interest to be worth. But when a writer, by drawing his materials from the documents of a country, trades with the public money, for his own benefit, and, publishing records before not generally diffused, hazards the character of the nation which preserved them, he becomes answerable to the people for the use which he has made of their property, and the care which he has taken to display with propriety, their treasures to foreign nations.

The interests of literature seem to require that the scientific data, collected by governments, should be accessible to all; that there should be as little as possible of that control, which is exercised, for example, in the English Navy; where no officer dares to publish his journal, though relating to a purely scientific voyage, until he has obtained the consent of the Lords Commissioners of the Admiralty, who generally withhold that permission, until the official journal has appeared. But, granting that the public officers may be as liberal with such stores as they should be economic with all others, does it follow that they may be misused at pleasure, by those who employ them? I think not. The journals, and especially the periodical reviews, are the proper courts of inquiry in all such cases, and it is their especial duty, in return from the patronage they enjoy, to watch carefully over the literary interests of the country, and to examine with more than ordinary impartiality and care, those writings, which connect the reputation of the country with that of the writer.

This care is particularly called for, in reviewing a work such as that which Mr. Darby has published; a work professing to embody all that the annual state reports, the public surveys, and the meteorological observations made, by order of government, at our military posts, have collected, respecting the topography, the physical character, the population, the climate, the resources of this country, the energy and the improvement of its inhabitants. Such a work has long been called for. We have treatises on particular subjects, drawn from the same stores, but no one has before endeavoured to render so generally current, the treasures we have been long accumulating. Many may have been deterred by the idea, that, in so doing, they would stamp their own effigy upon the coin: and a laudable modesty may have caused them to doubt the dignity of the impression. In short, Messrs. Editors, under all the circumstances of the case, I look upon this book as a report, made to Europe, upon the science of America, and which merely wanted, to receive its due character, the approbation of one or more of our leading journals. This official stamp has been affixed, in the last number of the American Quarterly, and the work is now a national one. The reviewer seems fully to comprehend the public and important character of the work, which he has approved; he expressly devotes seven pages to explain that character; he con-

siders Europe as questioning America, and he asserts, that "Darby's *View of the United States*" has done much, and will go far to satisfy these anxious inquiries and just requisitions of Europe. He concludes, that the work "is labour-saving to the American, and *all* that is desirable to the foreigner. *It presents us at the tribunal of science in Europe, exhibiting our own case, and telling a round unvarnished tale.*" "It is an analysis of our geography and political condition, that *rectifies all the theories* of her philosophers, and refutes all the misrepresentation of her travellers."

This is strong language, and such, we should suppose, as no one would venture to use on so important a subject, unless perfectly confident of his ability to pass judgment. I intend, in the present letter, to examine, how far this is the case, and to present the public with Mr. Darby's view as it appears in the *American Quarterly*: in a subsequent letter, Mr. Darby shall speak for himself.

In treating of the physical geography of our country, Mr. Darby divides the United States into three great sections; "that of the Atlantic slope; that within the great central valley of North America; and, thirdly, a slope, or inclined plane, extending from the rocky or *Chippewayan* mountains, towards the Pacific Ocean." The reviewer follows the same order, and, speaking of the three chapters which are devoted to the Atlantic slope, he observes, "instead of extracting paragraphs from these chapters, we will give an epitome of their contents, accompanied with some remarks of our own."

The first of these important remarks with which the reviewer has enriched Mr. Darby's work, and added to the physical knowledge of his country, is a theory. Theories, when properly managed, are certainly to be desired. Newton, Laplace, Watt, Adam Smith, Malthus, McAdam, as well as Capt. Symmes and Brunell, both of tunnel-making celebrity, were theorists; and, with the exception of the two last, demonstrated their theories to be of practical advantage: but the great fault of most system builders is that of overburdening a hobby, until its back is broken. The sailor, when he perceives that the tides do certainly obey the motions of the moon, places to the moon's account every phenomenon which he meets with in the water or the air. The Gulf stream, or, in Mr. Darby's language, the ocean river is the reviewer's moon. The low country, he observes, throughout Georgia, the Carolinas, Virginia, Maryland, Pennsylvania, and New Jersey, "is deformed with swamps and marshes," "bilious and intermittent fevers recur as regularly as the seasons, and render this region scarcely habitable, and its population enervated and inefficient." All this has been *occasioned by the Ocean River!* "The history of" this River (to use the language of Jefferson's noblest production) "is a history of unremitting injuries and usurpations, among which appears no solitary fact to contradict the uniform tenor of the rest, but all have in direct object, the establishment of an absolute tyranny over these states. To prove this let facts be submitted to a candid world."

It has cast up the sand which forms the country below tide water; it has caused an extent of country, fifteen hundred miles by one hundred and twenty, to be barren and full of pestilential marshes; it is about to increase the price of cod, and lower the importance of New York by creating the banks of Newfoundland into a continent. It keeps up a constant turmoil in the heavens, rendering the winters of the United States cold, and the summers hot. It has made our climate variable. It has cast up bars at the mouths of our rivers. It has prevented our best harbours from having rivers at all! It has brought upon us "the last breathings of the trade winds, fraught with the vapours of the Gulf." It has excited "tornadoes, and hurricanes of a tremendous and desolating character," "whose known rule of warfare is an undistinguished destruction of" orange and all other tender trees. "It has plundered our seas, ravaged our coasts, and destroyed, the lives of our people." "It is, at this time, transporting" the yellow fever from the West Indies, "to complete the work of death, desolation, and perfidy, totally unworthy" the chief stream of the Atlantic Ocean.

Now Messrs. Editors, though I acknowledge the Ocean River to be a very wicked river, I beg the reviewer to pause before he makes it so awfully depraved; for "none are all evil;" and having copied all that the reviewer has said against the Gulf stream, and, with the exception of one paragraph, nothing more, I will now beg to say something in its favor.

The bars, at the mouths of our rivers, I should suppose, were brought down by the rivers themselves, as similar bars are found in streams that run through flat, sandy, countries; and the very fact of those harbours that are deprived of rivers having no bars, is a proof of the hypothesis. The effect of the Gulf stream, in modfying the atmosphere to some extent about it, and in rendering the climate variable, I am ready to admit; but, whilst the eastern coasts of all continents are found to be colder than the western, it will not require the assistance of the Gulf stream to explain a similar phenomenon in America. The coldness of the eastern shores has been explained in various ways. The north east winds, which theory shows to come directly from the pole, have been supposed sufficiently to account for this remarkable fact; but the hypothesis is not complete. Others have suggested, that the prevalence of the north west winds occasions the superior and more regular temperature of the western coasts, by deriving warmth from the ocean in winter, and having their temperature reduced by the same agent in summer. Humboldt, who explains in this way, the mild winters of Ireland, and some parts of the European coasts, has observed, that the cloudy weather, which such winds occasion, will act powerfully to retain the radiating heat of the earth, which, under the clearer skies of the interior of the continent, dissipate the air in space. But this sagacious observer has been more cautious than the author of the Review before us in giving dogmatical explanations of meteorological facts, which are parts of too extensive and complicated a system, to submit to such summary decisions. Humboldt* merely observes, that the great similarity of climate, which appears to exist between the eastern coasts of Asia and South America, "sufficiently proves, that the inequalities of the seasons, of which we have endeavoured to fix the nominal relations, depend on the prolongation and enlargement of continents towards the pole; on the size of seas in relation to their coasts, and on the frequency of the north west winds, which are the *Vents de Remous* of the temperate zone."

* Humboldt on *Isothermal Lines*, in Edin. Philosoph. Journal.

It is not meant to deny, that the Gulf stream has a powerful influence; but when we recollect that Volney explained the supposed excess of temperature, to the west of the Alleghany, by the wind from the Gulf stream blowing up the valley of the Mississippi; that the reviewer explains the effect of temperature, which is now asserted to exist in this region, from the wind attracted to the Gulf stream, blowing *down* the same valley, and attributes the wide range of our climate to the same cause; when, finally, we remark a similar degree of cold, and a similar range of climate on the eastern shores of the other great continental division of the globe; would it not be assuming too much to explain these general facts by a partial cause; and ought we not rather to ask for a reason, why the Gulf stream should not have raised the mean temperature of our Atlantic coast above the corresponding coast of Asia?

Proceeding onward with the reviewer, we find him standing on the Appalachian range, and, looking westward, lost in wonder and astonishment at the almost unlimited expanse of the Mississippi valley. And good cause for amazement he had, when he discovered, that "the part of this valley in the United States is nearly twice the size of Europe." That is, a part of the United States is nearly twice the size of the whole! But we observe that the reviewer thinks little of accuracy in numbers; he asserts that the coal field of the plain of the central valley is 1,500 miles by 600: and, immediately adds, that its extent, in longitude, at one place is fifteen hundred and at another six hundred; the breadth of the whole plain he had before stated to be six hundred miles. I do not intend to dispute the actual size of the field; it is quite large enough to supply us with coal; but all the numerical statements in the Review are made in the same random manner with this.

The origin of prairies, the reviewer remarks, "has ocasioned much theory: it is to our mind," (the reviewer's), "very simple. They are caused by the Indian custom of annually burning the leaves and grass in autumn." We have heard Mathews the comedian, give a cockney's representation of the cause of motion in a steam-boat.—"You see Ma'am there's a thing about there, that moves this wheel, and this wheel moves that, and so the boat

goes on, that's all Ma'am!" Equally brief and simple are the explanations by which our theorists cut many a Gordian knot. The prairies, we are told, are caused by the Indians burning the grass, and the singular fogs of our autumn have the same origin; for the reviewer's theory is not more original in the one case, than if he had applied it to the other. But innumerable are the difficulties, which these simple solutions leave untouched. I will state only a few of them.

Are not extensive plains, clothed in luxuriant grass, to be found in other parts of the world, where annual burnings are not practised? Are not the rivers, adjoining which the dry prairies are usually found, as adequate to prevent the destruction of forests by fires as the rivers or mountains in other parts of America? Do not the trees, which the reviewer mentions as skirting these streams, show, that these fires *are* arrested by them? Why then were not the trees in all those parts of America where Indians and game were to be found, destroyed by fire? Is not the fact of grass alone growing, where trees can flourish, similar to that of one species of tree alone being found where another will grow, when the prevailing species is destroyed? Does not the growth of trees near the streams, and of grass in the higher and more exposed situations, suggest that these respective productions have the mastery where the soil and situation are favorable? Granting that the plain of the central valley has been a lake, as Volney suggested, and of which the reviewer expresses his "thorough conviction;" granting that limestone, Gypsum, and saline impregnations abound in it, for which we have the reviewer's authority; granting that the wind has great force in these extensive plains; would it not be probable that grass would be the first production after the retreat of the water, and might, for a long period, strangle other vegetation, as particular trees seem to have strangled incipient forests of other kinds, which spring up, with almost magical profusion, where the axe has cleared them breathing ground? Lastly, might not any one who chose to cultivate these weeds of theories, produce as "simple" an hypothesis as that of the reviewer, in five minutes? The "*barrens*," I am told, are kept from producing trees, by the cause which the reviewer mentions; but, were the actual *prairies* maintained by the same process, this would throw no light upon their origin.

I must beg the reader's pardon for having detained him so long with these simple theories, but they are a pernicious growth, and should be eradicated, unless cultivated by those, who are more skilful in bringing them to maturity, than in producing them in abundance. In which of these departments the rewiever succeeds best, we must leave our readers to judge; but get clear of theories with him, we cannot.

Our next step is to another simple theory. "The general level of this plain," (the Mississippi,) "is not more than eight hundred or nine hundred feet above the ocean; and, to form it into a shallow sea, its barriers need not be more than twelve hundred above tide water." The first great break *was* towards the south, in the direction of the Mississippi river; the gap between the Cumberland and Arkansas mountains is wide, *say one hundred and fifty miles;* but when we reflect that the volume of the water, thus discharged, was immense; and that this mountain was a frail secondary limestone in its construction, it is not surprising that it should have been "thus torn away. This breach *relieved* most of the vast section we are describing, leaving entire the northern part of the sea, where it was deepest, which included the northern lakes." Dr. Rees mentions, that the world began at three o'clock on a Sunday afternoon; had he still lived he would probably have told the reviewer the exact moment when the breach, one hundred and fifty miles wide took place, which appears to be the only part of the question on which he is in doubt.

At the next page we find this paragraph; "a quotation from Mr. Darby *proves*, that the Ontario lake has greatly," (by one hundred and seventy feet,) "lowered its bed." The *proof* consists in showing that a hill extends eighty miles out of four hundred and twenty, which, on this hypothesis, would have been higher than the water, that the hill looks like a barrier, and that marks are found upon its slope not unlike such as we might suppose the receding waters of a lake to leave behind them. What has become of the other three hundred and forty miles of hill, one hundred and seventy feet high, the reviewer says not: perhaps water in those days was easier decieved than it is now; for I ob-

serve that many geologists do not think it necessary to bank them in, all round: some of the waters, in old days, like some of our geologists at present, looked wholly to one side. But perhaps the Ontario waters were not of this class, for the fault appears to me to be more in the proof than in the hypothesis.

"We now come to Mr. Darby's chapter upon our climate; a subject of primary importance, not only to us, but to the philosophical world." "Mr. Darby, in the first part of this chapter, departs from his usual matter of fact way of treating his subject; he turns pedant, makes a ridiculous parade of his learning, generalizes too much, and spreads himself over the whole globe, until he is lost in the immensity of his own views. He calls up earth, air, and water, to show the readiness and extent of his calculations, and his great geographical knowledge; he estimates the proportion between the land and water of the whole globe; measures and gives the extent of each ocean; the deflections of each continent and its size; the ranges of all the mountains on the globe; the direction of the oceanic currents; the velocity, even, with which a particle of air is carried by the earth's motion in each parallel of latitude; in fine, there seems no end to his geographical mathematics. What has all this to do with the climate of the Ohio valley or the Atlantic slope?"

It has long been a secret in the art of criticism to mix some slight blame even with the warmest raptures; the connoisseur, in the inimitable tale of the *Vicar of Wakefield* always added, that the picture would have been better if the artist had taken more pains. In conformity with this mystery of the craft, the reviewer seems tenderly to have examined Mr. Darby's book for some too plethoric part, which the lancet of the reviewer might reduce without injury to the health of his patient. And he had determined, that a proficiency in mathematics, a readiness and extent of calculation, and great geographical knowledge, have nothing "to do with the climate of the Ohio valley or the Atlantic slope." That is to say, that an agent so changeable and fugitive as the wind, which is boldly figured in sacred writ as "blowing whither it listeth;" which mingles the temperature of Europe with that of America or Asia; which is daily rushing from the poles to temper the heats of the equator; and, in an over current from the equator, to mitigate the region of the poles; which is ten times more involved in its operations than the phenomena of the tides, to explain which, it has been found necessary to include all the waters of the globe in the calculation; that such a subject does not require the skill of a Halley, a Lambert, a Euler, a Mayer, a D'Alembert, a Kirwan, a Humboldt, or a Fourrier, but is solely to be resolved by the random guesses of simple theory makers; by the Gulf stream, and the ice in Canada. Such is not the opinion of Humboldt, whose treatise on Isothermal lines is generally considered as at the the head of meteorological works. This profound observer has forborne the luxury of explanation in which the men of more superficial information commonly riot, and has stated, "I shall limit myself to an enumeration of facts. The theory, by which these facts are connected, will be found in the fine analytical work with which M. Fourrier will soon enrich natural philosophy." The work here alluded to, has, I believe, never yet appeared, and the second (his associates say the first) mathematician, now living, seems to have found the data not sufficient for even his powers to build a theory upon, and we may say, without intending a pun, that the subject, is still involved in clouds.

"Mr. Darby gives the following rules to enable us to determine the climate of a given place."

"The laws upon which climate depends are few and simple."

"1. All places on the same parallel of latitude, and at a like height and exposure, must have similar temperature."

"3. Difference of exposure arises from different terrestrial inclination, proximity to, and bearing from, extensive bodies of land, from mountains, or from collections of water."

5. "The atmosphere, forming a part of the planet, is carried daily round the axis with the other bodies on the earth's surface, consequently, what is called wind, is a mere deviation from the natural motions of the air, caused by changes of temperature."

The first and third of these laws must be combined, to be intelligible, and they then amount to but little, since the exposure, here spoken of, in order to account

for the variety of climate, must include large portions of the earth, or, to be exact, the whole earth, so that no two points would have the same exposure. It is true that two points similarly situated on the *northern* parts of the two great continents of the earth may be considered as similarly circumstanced with respect to the whole earth, and consequently would have nearly the same climates. In other cases the rule would be found to be little more than saying, that one point on the globe has not, generally, the same climate as other points on the same parallel; and is not to be compared to the classification, now adopted among meteorologists, which separates climate into direct and solar climate; modifications in which the sun acts as a chief part, and modifications that are nearly independant of the sun.

The fifth rule cannot, in the present state of the subject, be demonstrated. What proof have we that if the land and sea were every where of uniform temperature, the high mountain ridges, and islands, raising themselves in peaks from the ocean to the clouds, would not gradually acquire electricity enough to produce those furious gusts, which now come charged with lightning and electric matter from them? What proof, that the unknown causes which give birth to the aurora, and to meteors, may not likewise be concerned in producing many of those irregular storms, whose origin is manifestly *electric*. There is little doubt but the electrical state of the atmosphere is connected with its temperature by laws, which we are begining to discover; but this is not the time to lay down an exclusive and peremptory rule upon the subject.

"These rules," the reviewer observes, "are just and well imagined, and will go far to assist us in determining the climate of any country." With this remark, I must totally differ. The rules, in question, appear to me far inferior to those recommended by Humboldt, they are too vague to afford much assistance in determining the general climate of any country, and are imperfect, in as much as the nature of the soil, which acts so important a part in receiving the solar, and radiating the terrestial heat, is altogether omitted.

But the next observation of the reviewer is a superior example of his acumen and attention. "In *Europe*," (it is Mr. Darby that is speaking,) "it has been *shown*, that a change of elevation of three hundred and thirty eight feet or one hundred metres *is equal to a degree of Fahrenheit*, and that *a similar difference of temperature arises from a degree of latitude*. Such allowances seem *too artificial* to be *any where very correct*, and are, in the United States, too small in the former, and too great in the latter case; but as it is impracticable to arrive at great precision on the subject, I have used four hundred feet, and one degree of latitude, as coming nearer the result of observation than any other elements I have compared with the tables."

Here Mr. Darby expressly states, that the fact of one degree of latitude producing a change of one degree of Fahrenheit did not originate with him, but that, on the contrary, he has found it not to be true in this country. Yet this passage elicits from the reviewer the following judicious remark. "The fact that a degree of latitude is equal to a degree of Farenheit, &c. is *original* and curious."

Equally "original and curious" is a sentence which occurs in the next page. "*Mr. Darby's* idea of Isothermal parallels is beautiful and philosophical." We very much doubt whether Mr. Darby, when he was humbly copying from Humbolt's well known and masterly treatise upon Isothermal lines, the manual of modern meteorologists, ever expected to find an annotator so ignorant of the subject as to suppose this "beautiful and philosophocal idea," his own.

The strange jumble, about the trade winds being produced by winds moving in parabolic curves from north west to south east, in consequence of the earth's motion about its axis, is utterly unintelligible. Every school boy knows that these winds are produced by currents of air, coming at first directly north and south from the poles, gradually deflecting to the east as they pass over portions of the earth where the diurnal motion becomes more rapid, and finally becoming east, or nearly so at the equator, or, rather, at a zone where the combined effects of the velocity they have acquired, and the change of the velocity of the earth's motion is a maximum. Daniel and others have shown this law to be subject to many modifications, but no possible explanation would justify the language "that the winds, acted upon by the motion

of the earth, and the vacuum occasioned by the sun's tract round the globe, make a parabolic curve from the north west to the south east, until they reach the tropics, where they become deflected and fall into the sun's track, and are trade winds: That the winds blow so universally and so generally in these directions, that they give character to all climates, and form the basis of all calculation in regard to them, subject however to be modified by circumstances."

Had the reviewer reversed what he has said, making the winds to flow north east instead of north west from general causes, and accounting for the actual prevalence of north west winds by those circumstances, which, he says, only modify them, he would have fallen into less error. Yet so delicate is this theory, that although the reviewer always mistakes what he explains, and commonly explains what is wrong, this balance of error has availed him nothing.

The Reviewer, whose partiality to Mr. Darby is calculated to have a most injurious effect upon his book, proceeds, I have no doubt unintentionally, to insult the acknowledged practical good sense of the American public by flattering them, where flattery is wholly unnecessary. The greater part of this trash, as it could afford no information, would not justify a comment; it abounds in such sentences as this. "The wild animals of our forests are larger and more active than the same species in other countries." What nonsense is this. Buffon asserted the contrary, and Mr. Jefferson, with the good sense of a man of the world, quietly pointed out the folly of the consequence he had thence deduced, by asking that vain and superficial writer to a party where himself and three equally tall Americans, looked down upon the eloquent little manager of the *Jardin du Roi*.

"Mr. Darby's eleventh chapter is rich in detail. He gives us tables of our population upon the *established ratio*." The census rolls of government, from the year 1790 to 1820, establish 3¼ per cent. per annum, as the ratio of increase for this population." I confess I was surprised to find this old error repeated in a work of such ample pretensions as the "View of the United States." The returns, give 35-10, 34-10 and 33-10 for the increase at the respective periods of *ten* years, included in the time above mentioned. The first of these may be reckoned 3 and the last 2. 9 per cent. per annum; the population at the end of any year being expressed by $(1.\ 33,)^n$ where n is the number of tens of years, elapsed since 1820. We have not therefore at present thirteen millions nor shall we have three hundred and seventy five millions at the end of 1890, as Mr. Darby calculates, but 12,821,000 will be the population at the next census, and three hundred and four millions in 1890. The population tables, formed by Mr. Darby, are wrong, therefore, from beginning to end, and instead of censuring him, with the reviewer, for being over deep in mathematics, we could wish that in this instance he had paid more attention to the first elements of it.

But it is not my present purpose to criticise Mr. Darby. I devoted this letter to the reviewer, and must not lose sight of him, now that he is fairly on his hobby, galloping through time, space, and arithmetic, with fearless indifference. We have seen that the limits of the Western Valley did not suffice for him, and that he doubled them; it now appears that the increase of the people of the United States is not sufficient, and this is doubled too. Dissatisfied with Mr. Darby's estimate of 3¼ per cent, which we have shown to be too large, and ignorant of the slow but regular decrease, exhibited in each successive return, the reviewer boldly asserts that the ratio of increase for the next fifty years, will be greater than it has been since the existence of our government," and labours hard to prove that it will be at least four per cent. per annum, a rate which, in one hundred and twenty years, would give a population to this country twice as great as that now assumed for the population of the world.

It is really inconceivable how an author, whose style and fluency show, that he is accustomed to write, could venture to utter such laborious extravagance, whilst speaking too in the responsible character which he professedly assumes, whilst addressing, through the respectible medium of one of our first reviews, the "tribunal of science in Europe;" telling them "a round unvanished tale," which is to "rectify all the theories of her philosophers and refute all the misrepresentations of her travellers." Can we suppose a writer in the *American Quarterly* to be ignorant, that a redun-

dant population is the worst of evils, a misery under which the old world now groans, a curse which, were the forebodings of the reviewer correct, would, in less than a century, render this happy country a scene of woe beyond what Milton has imaged in his pest house, or Dante figured in his tower of famine.

But we may safely trust, that not even our arch enemy, the Gulf stream, can bring these evils upon us. The wisdom of our government has provided documents which, in spite of the reviewer's contempt of arithmetic, will continue to be examined with care; documents so valuable, that the theory of population has, in a great degree, been built upon them; and these, whilst they exhibit an increase in our numbers, sufficiently rapid to satisfy any judicious mind, show likewise a regular alteration in that rate, too small to affect our immediate increase, but great enough to remove the period, when our people shall be too many for the land, to an unknown distance, to a time when the increased knowledge of the world may render the story of China, India, and Ireland, an historical tale.

But it is time that this "shadow of a shade" should end; and in taking leave of the reviewer, I think it but justice to the gentleman to say, that, throughout his review, there appears a facility of style, and a general indication of talent, highly worthy of respect; but agreeing with him as I do, in the important character of Mr. Darby's book, I cannot but regret that he should have come into the field so totally unprepared for his task.

Situated at a distance from the Old World; differing from it in institutions and manners; eagerly observed by all, from its rapidly increasing influence; alike misunderstood, loved, hated, and feared, is it not of importance that *America* should herself give a correct account of her progress in knowledge? Now let me ask the reviewer fairly and dispassionately to examine his own review; to observe the important character he has assumed; the dogmatical assertions which he has hazarded where the wisest men of the age are silent; the mistakes in numbers, the errors in facts, the want of knowledge of authorities, the praise of weak points, and the blame of strong; let him add the character of the work in which all this is published, and I am sure he will despair of finding forty-seven pages in the works of Faux, Flower, or De Roos, so well calculated to injure the country which he meant to serve.

PZ.

SOLOMON GESSNER.

Solomon Gessner, the celebrated German Idyll writer and author of the following "*scene from the deluge*," was born at Zürich, in the year of 1730, and died there in 1788, member of the grand council and bookseller in that town.

His best works are his *Idylls*, *First Navigator*, and *Death of Abel*, for which last he is more known out of Germany, than for any other of his productions. It was translated by Mrs. Collyer into the English Language.

His works have been published collectively.—The edition, from which the "*scene*" has been taken, appeared at Zurich, in 1818, from the "Gessner Bookstore" in two volumes, 24 mo.

SCENE FROM THE DELUGE.

Senuria and Semin.

The marble towers are already deep beneath the flood, and the dark mountain-waves roll above the tops of the hills: the lofty summit of one mountain, alone, stands above the waves; a dreadful tumult is heard around its sea-girt sides;—the clamour of the wretched who despair of attaining its summit, and whom death closely pursues on the billows. Here, a hill breaks loose from the mountain, and rushes, with its load of howling humanity, into the foaming flood; there concentrated showers wash away, in the wild stream, the son dragging after him the half dead father, or the disconsolate mother, with her load of children.

The highest pinnacle, alone, now stands above the desolation. Semin, a noble youth, to whom the fairest of maidens had vowed eternal love, had saved his beloved Semira on this summit. Alone, for the flood had now destroyed all; they stood in the howling storm. The waves dashed around them; above rolled the thunder, ane beneath them, the tumultuous sea. All around was terrific darkness, except when the lightning fitfully illuminated the dreary scene: every cloud with darker front, threatened to displace them, and every wave, with its thousand corpses, rolled on-

wards with the storm and sought after fresh destruction.

Semira pressed her beloved Semin to her heaving breast; tears flowed with the raindrops from her pallid cheeks; with faltering voice she spake. "There is no further safety, oh my beloved! my Semin! every where we are surrounded by raging death! oh, desolation! oh misery! death mounts nearer and nearer! which of these billows, oh which is to envelope us? hold me, hold me in thy trembling arms, my beloved! soon, soon shall I, shalt thou, be no more, carried away in the general confusion. Now, oh God! there it comes rolling on! how terrific! it rolls nearer, illuminated by the lightning. Now, oh God! oh God! righteous Judge." She spake and sank into the arms of Semin.

His trembling arm encircled the fainting fair; his quivering lips were silent; he no longer heeded the desolation around him, he saw only his fainting love resting on his bosom and felt more than the anguish of death.

He now kissed her pale cheeks, spattered by the cold rain; pressed her more closely to his breast and said: "Semira! beloved Semira! awake! oh return once again into these scenes of terror, that thy eyes may once more regard me; once more let thy pale lips declare, that thou lovest me till death; yet once ere the flood envelopes us."

He spake and she revived; regarded him with a look full of tenderness and inexpressible anguish and then cast her eye towards the scene of desolation. "God! righteous Judge!" she exclaimed "is there no safety, no mercy for us? oh how the billows rage! how the thunder rolls around us! what terrors announce thy implacable vengeance! oh God! our years have flowed on in innocence; thou! the most virtuous of youths! alas! alas! they are all now gone! they, who blessed my life with thousands of joys, are all gone! and thou, who gavest me life! oh heart rending sight! from my side the flood tore thee away; yet once thou raisedst thy head and thy arms, desirous to bless me, and wast swallowed up. Alas! they are all gone! and yet oh Semin! Semin! the solitary, desolate, world, at thy side, would be a paradise to me! oh God! in innocence our youthful years have flitted away. Alas! is there no hope of safety, none of mercy?—yet what says my rending heart? oh God! pardon us! we die! what is human innocence before thee?"

The youth clasped his beloved, who trembled in the stormy wind, and thus spake: "yes, my beloved! every thing living is swept from the earth; amidst the tumult of this devastation no mortal howls. Oh dearest! dearest Semira! the next moment will be our last. Yes, all hopes of this life are gone. Every blissful prospect, what we had imagined, in the enraptured moments of our love, is gone: we must die! death stalks onwards; already it encircles our trembling limbs; but let, oh let not as reprobates this general fate await us! we must die! and, oh my beloved! what! oh what would have been our longest, happiest life? a dew drop, which hangs on the rock, and before the morning sun may fall into the sea. Courage then; beyond this life is joy and eternity; let us not tremble, when we make the passage; embrace me and thus let us await our destiny. Soon, oh! my Semira! soon will our souls soar above this desolation; filled with a sentiment of ineffable beatitude they will soar upwards. Oh, God! what bold expectations fill my soul. Yes, Semira, let us raise up our hands to God! His ways are inscrutable to mortals. He who has breathed into us the breath of life, sendeth death to the righteous and the wicked. Well, however, for him who hath followed the ways of virtue. 'Tis not for life we supplicate, most righteous! take us to thy tribunal: but oh! enliven that hope, that blissful hope of inexpressible happiness which no death can again disturb. Then may ye roll, ye thunders! then mayst thou rage, oh desolation! dash over us, then, ye waves! praised be He, the righteous, praised be He; may this be the last thought of our soul in its mortal tenement."

Courage and joy animated the beauteous countenance of Semira; she stretched forth her hands in the tempest, and exclaimed: "yes! I feel them; all these great these blissful hopes, praise the Lord, my lips! shed tears of joy, ye eyes! until the coming death, shall close you. A heaven of bliss awaits us. Ye have gone before us; ye beloved all! we come. Soon, oh! soon, shall we again see you. They stand before the throne of the ruler. He has assembled them before his presence, from

every part of his kingdom. Roll on, ye thunders! howl, thou desolation. Ye are the hymns of his righteousness! roll over us ye waves! see, beloved! embrace me! death is coming from thence, comes on that dark wave; embrace me Semin! leave me not; oh! already the flood rises upon me."

"I embrace thee, Semira!" replied the youth, "I embrace thee! oh death, I welcome thee. Here we are; praised be the eternal judge!"

Thus they spake, and the flood washed them away locked in each others arms.

XY.

THE POLICY OF ENCOURAGING MANUFACTURES.—No. 6.

We must now place the Manufacturer by the side of the Agriculturist.—JEFFERSON.

We have now examined the principal objections to the policy of encouraging manufactures, in Virginia, not perhaps with the copiousness that the subject required, but as fully as accorded with the narrow limits of this journal: and we think we have said enough to satisfy any mind which had not prejudged the question, that those objections are all invalid; that human labour is as cheap or cheaper than it is in the countries which now supply us with manufactures; that if some parts of the requisite capital are dearer with us than with them, others are yet cheaper; that the moral and political evils apprehended by some from the establishment of manufactures are either visionary, or are inevitable, in any state of things, and would be lessened rather than aggravated by such establishments; and lastly, that the labour and capital of a country do not, at all times, and under all circumstances, spontaneously take the most profitable direction, but that, when it first becomes advantageous for a nation to manufacture for itself, the agency of the government may be beneficially exerted in inducing individuals to acquire the requisite skill and knowledge, in changing the habits, and overcoming prejudices of the consumers, and in protecting the first undertakers against the hostility of foreign rivals, and ruinous fluctuations of trade.

These difficulties which meet us in the threshold, and which have been so forcibly urged by the opponents of the manufacturing policy, being removed, it requires little argument to prove the benefits that would arise from the introduction of manufactures among us. Every one knows that a country must have clothes, furniture, tools, and utensils, as well as provisions, and that its wealth consists in the abundance of the first species of commodities, as well as the last. It is evident that there are but two ways of procuring these manufactured articles, one, by giving raw produce in exchange for them, and the other, by fabricating them at home. The first mode depends on the concurrence of foreign nations; we cannot purchase of them, if they will not buy of us. If they refuse to purchase our flour and other bread stuffs, the states which have little else to export, must, of necessity, supply themselves with manufactures, or do without them. This has been the situation of the middle states, and of a part of this state, for the last ten or twelve years. Being thus deprived of the market they formerly had in Great Britain for their principal staple wheat, and not finding it easy to turn their industry into the unaccustomed channel of manufactures, the consequence has been that their lands have fallen in price, with their products, wages have also fallen, and the incomes of all classes have been proportionally diminished, and thus, with all the constituents of national wealth, except manufacturing skill, we have, for want of that, been continually growing poorer and poorer.

Let us suppose it practicable to acquire manufacturing skill in Virginia, it seems reasonable to suppose that we could profitably engage in the following manufactures.

Coarse cotton fabrics. The circumstances in favor of this manufacture, are that the raw material is one of the staple products of the country, and can of course be had somewhat cheaper here than in the northern states. In this manufacture, too, machinery is peculiarly efficient, and water power is no where cheaper than in Virginia. In the only three experiments known to us, the undertakers have met with success; one at Petersburg, one in Fluvanna, and one at Richmond. In the last, Cunningham and Anderson's manufactory, a thick coarse cotton fabric is made at fourteen cents the yard, which is at once bet-

ter and cheaper than German oznaburgs for slaves, and must, we think, supersede the use of that article altogether.

Bulky iron fabrics. Whenever the expense of transportation adds materially to the cost of the manufactured article, and but a tolerable degree of manual skill is required, the manufacture may be carried on in those places, where iron can be obtained on reasonable terms. Nails, ploughs, spades, hoes, axes, scythe blades, saws, augurs and similar tools are of this description, nearly all of which are now procured abroad or in other states. Some of these articles are now manufactured near Richmond, of a superior quality, in a manufactory owned by General Harvie, and, it deserves to be mentioned, in confirmation of some of our previous speculations, that the labour is here carried on almost entirely by slaves.

Coarse woolens. Whenever our citizens shall turn their attention to the raising of sheep, so as to furnish an adequate supply of wool on reasonable terms, fabrics of this material may be made in any village possessing water power, and sufficiently large to afford accommodations for the requisite workmen. The supply of the raw material and its manufacture will go hand in hand. As soon as a ready market is furnished at home for wool, it will probably be afforded as cheaply in the western parts of this state as in almost any part of the Union.

Supposing it practicable, (as we really believe it to be,) to manufacture these articles for ourselves, in no long time, what must be the effect on the wealth and prosperity of the state? Without indulging in any golden visions of the utmost possible opulence, we may confidently say that the prosperity of the state would be greater, and would rest upon a more solid foundation, than at any former period. We will briefly notice the consequences that may rationally be expected.

1. The labor withdrawn from agriculture to manufactures, would lessen the present redundancy of our staple products, and adapt the supply to the demand, by which the price would necessarily be improved. We know the effect of a short crop of tobacco on the price of that commodity, and a withdrawal of a part of the labour expended in its culture would have the same effect on the price. We might then not make more Indian corn than we could find a good market for in such of the West Indies, as will receive it, and in Madeira; and perhaps, not more flour than would supply, without *glutting*, the markets of Cuba, Spanish America, and the West Indies. Should the states south of us be able to engage in manufactures to the limited extent we have been considering, then the same salutary check would take place in the cultivation of cotton, and the same beneficial result in the advancement of its price: some persons, looking only to the number of operatives employed in the manufactories, cannot conceive that the amount of agricultural products could be materially diminished by the manufacturing policy. But those who are immediately employed in the fabrication of the commodity constitute but a small part of the number to whom manufactures give employment. It comprehends also those who erect the buildings; who make the machinery and tools; who transport, first the raw material to the manufactory, and then the manufactured commodity to its various points of destination; and lastly, those who furnish these several classes with provisions. In this way a commodity, employing a hundred persons in a manufactory, may employ five hundred, or even a thousand, out of it.

Nor can we estimate the amount of labour withdrawn from the cultivation of our staple products, by merely reckoning the number of labourers transferred to manufacturing occupations, since these formerly furnished themselves with provisions, and they must now be furnished by the remainder of the agricultural class. Thus, suppose the number transferred to be ten thousand, and that, besides raising their own provisions, they produced for market five thousand hogsheads of tobacco: as these ten thousand labourers, must now be supplied with provisions by others, there must be a yet farther withdrawal of the labour previously assigned to the cultivation of tobacco, in addition to that employed in producing the five thousand hogsheads.

Besides, the difference between the quantity of an article which is sufficient to glut a market, and that which will afford it an adequate supply, is far less than might at first be supposed. A reduction of the supply by one tenth, would sometimes be sufficient for that purpose. A reduc-

tion, by one fifth, would commonly, be so; and we have seen that any given reduction in the supply of our staple products, requires a yet smaller reduction in the number of labourers transferred from agriculture to other employments.

2. After the attention of our people was once fairly turned to manufactures, our skill in the mechanical arts would be progressive, and would be extended to many other operations which are now little thought of, or are regarded as beyond our reach. There are parts of the United States in which superfine broadcloath is now made, in which, twenty years ago, the various processes by which that beautiful fabric is perfected, were considered almost as impracticable to us as conjuration. It is impossible to foresee what degree of skill, what extent of improvement, what useful discoveries, what activity and enterprise, the introduction of manufactures among us may evolve; but be they what they may, every addition to any one of these is so much added to our wealth and resources. Without referring to the inventions of Whitney and Fulton, the effects of which on the wealth of the nation are beyond all calculation, we may venture to assert that a hundred skilful workmen in Sheffield or Birmingham, or even in Manchester or Leeds, earn for their country more than any thousand of our labourers employed in tilling the earth, and that we pay every year to Great Britain more for the one, than we can obtain for the other.

3. As soon as we have ascertained by actual experiment what manufactures we can carry on to advantage, competition at home will produce the natural effect of reducing the price, by which the consumers, that is, the whole community will eventually be benefited. Who can doubt that coarse cottons are now selling cheaper, in consequence of domestic competition being superadded to the foreign?

4. Manufactures are peculiarly fitted to furnish employment to some of the idle classes in the slave holding states. In such countries personal labour is apt to be regarded as degrading, and it is seldom exerted except by those whom necessity impels to it. Even those who may not yield to this prejudice, from being less inured to labour, are less capable of enduring a continuance of it. Our citizens will then feel less repugnance to be employed in manufactories, partly because the labour in them is light, and partly because they will assimilate it to that exercised in mechanical trades, which is far more respectable in their eyes than agricultural labour. Perhaps, too, we might add, that the superintendence of manufacturing establishments would afford lucrative and respectable employment for some of those who now overstock the professions of law and physic, at home, or are roaming in quest of better situations in the western country.

5. We may add to this list of benefits, from manufactures, several of a more general nature; as that they secure a nation against the inconvenience of depending for its essential comforts on foreign commerce, which, is liable to be suspended in war and shackled by the regulations of other nations in peace. They provide a home market, which is beyond the reach of the hostility, or rivalry, or caprice of foreign policy.

6. And last. Manufactures are indispensible to the continued improvement of a nation in wealth, strength and respectability. Where a country is confined chiefly to agriculture, if it is fertile, a large portion of the people must be employed either in manufactures, or be idle. If the latter, they will be comparatively poor, ignorant and uncivilized. But to atttain the former character, every way so much more desirable, they had better acquire the requisite habits of skill and industry, which can only be gradually superinduced, before they are impelled by want and necessity. If they wait for these to make them manufacturers, they may never become such. Sicily and Egypt produce as much as will support an immense population beyond those who are employed in husbandry, and the excess are indolent and poor. Had they once been familiarized to industrious habits, they would, in all probability, have persevered in them, and been proportional gainers in wealth, strength and numbers.

In conclusion, we would remark that there is no doubt that the public encouragement for which, with a single view to the interests of Virginia, we have been pleading, may be carried too far; and that it is better for governments to do nothing than to do too much; but it will be time enough to press this view of the subject, when such a disposition shall manifest itself in this state; at present the current

sets strongly the other way, from the adventitious circumstances before referred to, and we were desirous of presenting the difficult and important subject in an aspect in which, seen by itself, it was more likely to be judged without bias or prejudice. If the public should eventually decide with us in favor of the encouraging policy, it will be for the legislature of Virginia to say in what mode and to what extent that encouragement shall be given, for we are persuaded that it is in the power of the state legislature to do more, under existing circumstances, to advance manufactures in this commonwealth in one year, than any tariff of the General Government could do in five, or perhaps ten years; and such a mode of encouragement is recommended no less by its justice than its efficiency.

V.

OLD PROVERBIAL EXPRESSIONS.

"I have, for my recreation amongst more serious studies, collected some few apophthegms: therein fanning the old: not omitting any, because they are vulgar; for many vulgar ones are excellent good."

LORD BACON.

By hooke and crooke.—The proverb of obtaining every thing by *hooke and crooke* is said to have arisen in the time of Charles I, when there were two learned judges, named *Hooke* and *Crooke*; and a difficult cause was to be gained either by *Hooke* or by *Crooke*. The proverb is, however, older than that period: it is used by Spenser in his "*Faerie Queene.*"

"His tyreling jade he fiersly forth did push
Through thicke and thin, both over banck and bush,
In hope her to attaine by *hooke or crooke.*"

B. III. Canto I.

And again:

"The spoile of peoples evil gotten good,
The which her sire had scrap't by *hooke and crooke.*"

It seems, also, to have been used as a proverb by B. Riche, in the second part of his *Simonides*, 1584.

Eche plies it now, by *hooke and crooke* to gain,
In hope by wealth to climb the steppes of state.'

Need gars naked men run and sorrow gars websters spin."—This is an old Scotch proverb. The word *gar* signifies "to cause, to make," and "to force or compel" but the last is only a secondary sense. Hence the Scotch proverb, "*Gar* wood is ill to grow." In the old Suio-Gothic *gider-a, gar-a* corresponds to the Latin *facere*, to make. The word *gar* is not, however, confined to Scotland; it is old English: Chaucer uses it in the *Reve's Tale*:

But specially I pray thee, hoste dere,
Gar us have mete and drink and make us chere."

And Spenser in his "*Shepheard's Calender*:"—

"Tell me, good Hobbinoll, what *garres* thee greete? April."

"*When the stede is stolen sparre the stable door.*"—This is the proverb as given by Skelton, in his "*Crowne of Laurells.*" Todd, in his edition of Spenser, quotes it from Skelton and sagaciously adds "so likewise in *Adagia Scotica*, &c. "A man may *speir* the *gate* to Rome." Again, "many man *speirs* the *gate* he kens full well." But the truth is Mr. Todd has here fallen into a grievous error: in both these proverbs the word to "speir" means to "ask or inquire" from the Anglo-Saxon *spyr-ian*, "to inquire or ask after;" whilst to *spar* or *spare*, still used in the North of England and Norfolk, in the sense of "to shut, to close" is from the Anglo-Saxon *sparran* of the same signification. Chaucer uses the word in this sense and Spenser in his "*Shepheard's Calender*," for May:—

"And, if he chaunce come when I am abroade,
Sperre the gate fast, for fear of fraude."

"*A skabbed sheep fyles all the flock.*" This is an old Scotch proverb. The word *fyle* in this and the following,

"*It is a nasty bird that files its ain nest*" Is employed in the same sense as "defile."

"Quhat hard mischance *filit* so thy plesand face."

DOUGLAS' *Virgil.*

The word is likewise Old English. Thus Spencer:—

"Where feeling one close couched by her side,
She lightly lept out of her *filed* bedd."

Faerie Queene, B. III. C. I.

And again:—

"The corne is theyrs, let other thresh,
Their handes they may not *file.*

Shepheard's Calender, July.

"*A mirk mirror is a man's mind.*—Al-

so Scotch. The word *mirk* in the signification, "dark" is Old English. It is used by Chaucer :—

"The shadowe maketh her bemes *merke*,
And her hornis to shewin derke."
Rom. of the Rose.

And by Spenser :—

"Diggon, I praye thee speak not so dirke,
Such myster saying me seemeth to mirke."
Shepheard's Calender, September.

Dainty makes dearth.—This proverb is employed by Spenser; and is still common.

"So forth they rode, he feining seemely merth,
And shee coy lookes; so *dainty, they say, maketh derth.*"
Faerie Queene, B. I. C. II.

"*Patience perforce is a medicine for a mad dog.*"—This is the proverb, as contained in Ray's collection; but, amongst many of the older writers, "Patience perforce," seems to have included the whole saying or exclamation; as for example in Spenser :

"To forth he far'd as now befell, on foot,
Sith his good steed is lately from him gone:
Patience perforce: helplesse what may it boot
To fret from anger, or for griefe to mone?
Faerie Queene, B. II. C. III.

And in Shakespeare :—

"*Patience perforce*, with wilful choler meeting,
Makes my flesh tremble in their difference."
Romeo and Juliet.

"*As merry as Pope John.*"—This is an Old English saying, the precise origin of which, is not clear. It is in the old play of *Damon and Pythias* and in Fox's *Acts and monuments.*

"*Many a true word is spoken in jest.*" In Scotland the proverb is :—

"*There are many sooth words spoken in bourding.*"

Sooth, in the Scottish, signifies "true" *bourd* is a jest :—

"*A sooth bourd is no bourd* :" this is a common proverb as well as the following :—

"*It is a sooth dream that is seen waking.*"

Bord in this signification is Old English :—

Thus, Spenser :—

"They all agreed: so, turning all to game,
"And pleasant *bord*, they past forth in their way."
Faerie Queene, B. IV. C. 4.

"*To answer mum.*—

Mr. Todd thinks, that this is possibly an allusion to the "*mummers*," a strolling crew, whose custom it was to answer only *mum.*—Spencer uses the saying :—

"And unto every thing did answere *mum.*"
Faerie Queene, B IV.

So also in Howel's proverbial sentences :—

"*Mum is counsell.*"

To dine with Duke Humphrey :

In the body of old Saint Paul's, in London there was a huge and conspicuous monument of Sir John Beauchamp, burried in 1358, son of Guy and brother of Thomas, Earls of Warwick. This, by a vulgar mistake, was at length called the tomb of Humphry, Duke of Gloucester, who was really burried at St. Alban's, where his magnificent shrine still remains. The middle aisle of St. Paul's was called the Duke's gallery, and was once a favorite prominade for all classes of society. To dine with Duke Humphry meant, that the person had walked all day in that promenade on "Powles Walkes" without dinner.

YY.

TRANSLATION FROM TASSO.

This is too loose to be called a translation and too close for an imitation of the beautiful stanzas of the sixth canto of "*La Gerusalemme liberata*" of Tasso commencing as follows :—

"Deh mira, egli canto, spuntar la rosa
Dal verde suo, modesta e verginella:

Ah! lady, see yon budding rose
Forth bursting from its chalice green;
And see how modestly it glows,
Blushing its beauties should be seen;
Its loveliness half hid and half reveal'd,
More brightly shines, the more it is conceal'd.
Behold it now with bosom bare,
Expand its honours to the air,
Full blown. But see it languish now,
Each streak of red has left its brow.
Is this the rose so late admir'd?
By thousands sought, by all desir'd?

Thus passes, as the vernal rose,
This fitful, mortal, life of ours,
With hues as bright, when first it blows,
Its date—brief years in place of hours.
Poor faded rose! returning spring,
Fresh leaves and roses still shall bring,
But to the heart whose verdure's o'er,
No spring returns:—it blooms no more.

Then cull the rose, while matin dew
Yet sparkles on its glittering leaves,
Then pluck love's rose while life is new,
Ere yet that gentle bosom grieves;
While young and beautiful and gay,
Unnumber'd triumphs mark thy sway;
Ere age has dimm'd that beauty's shine,
While hearts responsive throb to thine.
Lady! return what you receive,
Who'd hold a heart, a heart must give.

D.C.T.

PROVERBS REGARDING THE SWALLOW.

The Swallow was an object of much attention, to the antients. The Egyptians consecrated it to Isis. By the Romans it was sacrificed to the Lares from its building in houses to which the Lares were the guardian deities, and it was a common victim to Venus. The flight, or the sitting of swallows, on certain places, was an unfavorable omen. When Darius proceeded against the Scythians his misfortunes were foretold in this manner: as well as those of Pyrrhus and of Antony by the alighting of those birds on the tent of the former and the ship of the latter.

The swallow was, also, employed at Rome, as the carrier pigeons now are. Pliny related that Cæcina Volaterranus, when he ran his *Quadrigæ* or four horse chariots, in the circus, took swallows along with him, to transmit by them the intelligence of his victory to his friends. To these birds he tied threads of a certain colour, and as soon as the birds were let loose, they flew rapidly to the nests they had constructed in the roofs of Valaterranus.

It will be seen, hereafter, that these birds entered largely amongst the prognostics regarding the weather which were implicitly relied in by the antients.

As the harbinger of summer, the swallow is known, in all countries, and it is remarkable that most countries have a proverb relating to its accidental appearance before its usual time. The Greeks have Μια Χελιδων εαρ ου ποιει. The Latins *Una Hirundo non facit ver;* the Italians, *Una Rondine non fa primivera,* the Spanish, *Una Golondrina no hace verano,* the French, *Une Hirondelle ne fait pas le printems*: the Germans, *Eine Schwalbe macht Keinen fruehling:* the Dutch, *Een Swaluw maakt geen zomer:* the Swedes, *En Suala goer ingen sommar:* and the English, "one swallow doth not make a summer."

*

UNIVERSITY INTELLIGENCE.

Public Examination.—(Continued from page 141.)

SCHOOL OF MATHEMATICS.

Junior Mathematical Class.

Algebra.

1. Add together $5\,a + 2\,a\,x$ and $3\,a\,x + 7\,a + 6$.
2. Divide $x^3 - a^3$ by $x - a$.
3. Multiply $x^4 + a\,x^3 + a^2\,x^2 + a^3\,x + a^4$ by $x - a$.
4. Square $x^3 + a^3$
5. Multiply $a^{1\cdot3}$ by $a^{2\cdot4}$
6. Resolve $\sqrt{}(a^2 + x + 1 =) \sqrt{}x$; as a simple equation.
7. Resolve $\sqrt{}\,a + \sqrt{}\,x = \sqrt{}\,(a\,x)$ as a simple equation.
8. Resolve the equation $9\,x + 17 + 8\,x^2 = 4\,x + 1$.
9. Two men made a bet; A betted twice as much as he could win, minus seven dollars, and B three times as much as he could win, minus ten dollars. What did they bet?
10. A cistern will be filled by a pipe in three hours, by a second in two, and by a third in the same time as by these two together. In what time will it be filled by the three pipes running at once?
11. A agreeing to meet a friend B, brings two bottles of wine, B brings four, C joins them and drinks two of the bottles for which he pays four dollars; how ought this to be divided between A and B?
12. It is required to find two numbers such that the square of the first plus their product shall be 100, and the square of the second minus their product 50.

Arithmetic.

1. Add, 1-7, $\frac{1}{3}$, and $\frac{1}{2}$ together.
Multiply 5-6 by 7-11.
Multiply 37.45 by 8.9
Divide 835.784 by 3.692.

Legendre's Geometry.

§. 1. Theorem 41.
§. 2. " 61.
" 122.
" 126.

Propositions demonstrated orally.

Senior Mathematical Class.

Trigonometry.

1. If one angle of a plane triangle be 129° 34′ and the other two sides in the proportion of 4 to 7, what are the other angles ?

2. Given in a spherical triangle the quadrantal side C A = 90, an angle C = 42° 15′ and the angle B = 115° 20′ to find the side C B.

3. Show the use of the supplemental triangle.

Analytical Geometry.

1. Find the conditions necessary for a line to be perpendicular to a plane, and give the distance from a given point in the perpendicular to the plane.

2. Investigate the equation to a plane.

Differential Calculus.

1. Find the differential of $\frac{\sqrt{(a+bx)}}{\sqrt{(a^2-x^2)}}$

2. Find the differential of e^{mx}.

3. Expand $(a+x)^{a+x}$, by Maclaurin's theorem.

4. Find the differential of cosec $m e^{x}$.

5. Find the greatest cone that can be cut out of a given sphere.

UNIVERSITY OF VIRGINIA.

The next session will begin on the 10th. of September and continue till the 20th. of July following.

The expenses for the session of upwards of ten months are as follows:—

Board, including bed and other room furniture, washing and attendance.	$100
Fuel and Candles to be furnished by the Proctor at cost, and five per cent, estimated at	20
Rent of an entire Dormitory $16; for half if occupied by two students.	8
Use of Library and public rooms.	15
Professors fees, if one professor be attended, $50; if two, each $30; if more than two, each $25.	75
	$218

1 Professor of Antient Languages.
DR. HARRISON

2 " of Modern Languages.
DR. BLAETTERMANN.

3 " of Mathematics.
MR. BONNYCASTLE.

4 " of Chemistry.
DR. EMMET.

5 " of Natural Philosophy.
DR. PATTERSON.

6 " of Medicine.
DR. DUNGLISON

7 " of Anatomy and Surgery.
DR. JOHNSON.

8 " of Moral Philosophy.
MR. TUCKER.

9 " of Law.
MR. LOMAX.

The instruction is conveyed, partly by lectures and partly by the study of approved text books, and in all cases, the assiduity of the student is tested by a rigid system of examination.

Every student, under the age of twenty one years, is required to attend at least three Professors or two Professors and the Demonstrator of Anatomy and Surgery, unless, when he matriculates, his parent or guardian shall have prescribed, in writing, the schools which he is required to attend, or unless, the Faculty for good cause shewn, shall allow him to attend less than three.

Monthly circulars are written to the parents and guardians, stating the attendance of each student at lecture, and exhibiting the student's proficiency and deportment.

To be admitted, the student must be sixteen years of age. He is required to wear a uniform dress the particulars of which are detailed in the enactments. This rule will be rigidly enforced; the prescribed uniform will have to be worn on all occasions, both within and without the precincts, when the student appears out of his room, except, that in warm weather, he may wear such light gown or coat within the precincts, as the Chairman may approve.

The attention of parents and guardians is particularly drawn to this enactment, in order that their sons or wards may not be provided with clothes which cannot be permitted to be worn.

Students entering the University after the commencement of the session, shall pay board only for the time unexpired, at the yearly rate, but shall pay the full fees and rents at whatever time they may enter.

In the Medical school, one full course at the University is considered by the authorities of the University of Pennsylvania as equal to one course there.

A. S. BROCKENBROUGH, PROCTOR.

NOTICE TO CORRESPONDENTS. &c.

Correspondents will please to impute any delay in noticing their communications, to the temporary absence of the editors.

Authors and Publishers, desirous of having works noticed in the Museum, must transmit them free of expense, to the Editors at the University.

Advertisements, when of a purely literary character, will be inserted on the last page of the Journal.

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